

What is claimed is:

1. An apparatus comprising:

a general purpose computer including associated memory storage;

a voice application platform adapted for receiving a unit of input information from an application, said voice application platform including a speech recognizer for recognizing speech as a function of said unit of input information; and

a command processor adapted for analyzing a first unit of input information by said voice application platform and identifying a characteristic of said first unit of input information received and for modifying said first unit of input information to form a modified first unit of input information as a function of said characteristic.

2. An apparatus according to claim 1 wherein said first unit of input information includes a grammar.

3. An apparatus according to claim 1 wherein said characteristic is indicative that said first unit of input information includes a set of terms and said first unit of input information is modified to produce said modified first unit of input information that includes at least one additional term not included in said first unit of input information.

4. An apparatus according to claim 3 wherein said at least one additional term is a synonym of at least one term in said set of terms.

5. An apparatus according to claim 3 wherein said at least one additional term can be part of a phrase within which at least one term in said set of terms can be used.

6. An apparatus according to claim 3 wherein said at least one additional term is associated with a first function that can be performed when said voice application platform recognizes said at least one addition term.

7. An apparatus according to claim 3 wherein said set of terms is representative of a set of responses expected to be received by said application and said at least one additional term is a synonym of at least one term in said set of terms.

8. An apparatus according to claim 3 wherein said set of terms is representative of a set of responses expected to be received by said application and said at least one additional term is associated with a first function that can be performed when said voice application platform recognizes said at least one addition term, whereby said first function is adapted to include in a response to be sent to said application, at least one term in said set of terms.

9. An apparatus according to claim 8 wherein said first function is further adapted for substituting said at least one term in said set of terms for said at least one additional term in a response to be sent to said application.

10. An apparatus according to claim 3 wherein said set of terms is representative of a set of responses expected to be received by said application and said at least one additional term is associated with a first function that can be performed when said voice application platform recognizes said at least one addition term, whereby said first function is adapted to include, in a response to be sent to said application, a term selected from a memory as a function of said at least one additional term recognized by said voice application platform.

11. An apparatus according to claim 10 wherein said term selected from a memory is associated with a user of said voice application platform.

12. An apparatus according to claim 3, wherein said command processor is connected to said speech recognizer and adapted for receiving user responses recognized by said speech recognizer and for modifying said user response if said response matches one of said additional terms of the modified first unit of input information.

13. An apparatus according to claim 1 wherein said first unit of input information includes a first type of input information associated with a first speech recognizer based upon a first speech recognition paradigm and said first unit of input information is modified to produce a second unit of input information which includes a second type of input information associated with a second speech recognizer based upon a second speech recognition paradigm which is different from said first speech recognition paradigm.

1 14. An apparatus according to claim 13 wherein said second unit of input information  
2 includes input information that is the speech equivalent to the input information in said first unit  
3 of input information with respect to the speech recognized.

1 15. An apparatus according to claim 13 wherein said first unit of input information  
2 represents a first set of terms and said second unit of input information represents a second set of  
3 terms and said first set of terms is a subset of said second set of terms.

1 16. An apparatus according to claim 1 further comprising a prompt synthesizer adapted for  
2 receiving information representative of a prompt, and wherein said first unit of input information  
3 includes information representative of a prompt and said command processor receives said  
4 information representative of a prompt and said command processor modifies said first unit of  
5 input information as a function of said information representative of a prompt.

1 17. An apparatus according to claim 1 further comprising a prompt synthesizer adapted for  
2 receiving information representative of a prompt, and wherein information representative of a  
3 first prompt is received from said application and said voice application platform is adapted for  
4 presenting said first prompt to a user and a second prompt to said user.

1 18. An apparatus comprising:  
 2 a general purpose computer including associated memory storage;  
 3 a voice application platform adapted for receiving a unit of input information from an  
 4 application, said voice application platform including a speech recognizer for recognizing  
 5 speech as a function of said unit of input information; and  
 6 an command processor adapted for analyzing a first unit of input information and  
 7 identifying a characteristic of said first unit of information received by said voice application  
 8 platform and for replacing said first unit of information with a second unit of input information  
 9 selected as a function of said characteristic.

1 19. An apparatus according to claim 18 wherein said first unit of input information is a  
 2 grammar and said second unit of input information is a grammar.

1 20. An apparatus according to claim 18 wherein said characteristic is indicative that said first  
 2 unit of input information includes a first set of terms and said second unit of input information  
 3 includes at least one term not included in said first set of terms of.

1 21. An apparatus according to claim 20 wherein said at least one term is a synonym of at  
 2 least one term in said first set of terms.

1 22. An apparatus according to claim 20 wherein said at least one term can be part of a phrase  
 2 within which at least one term in said first set of terms can be used.

1 23. An apparatus according to claim 20 wherein said at least one term is associated with a  
2 function that is performed by said voice application platform.

1 24. An apparatus according to claim 20 wherein said set of first terms is representative of a  
2 set of responses expected by said application and said at least one term is a synonym of at least  
3 one term in said first set of terms.

1 25. An apparatus according to claim 20 wherein said first set of terms is representative of a  
2 set of responses expected by said application and said at least one term is associated with a  
3 function that is performed when said voice application platform recognizes said at least one  
4 term, whereby said function is adapted to include in a response to be sent to said application, at  
5 least one term in said set of terms.

1 26. An apparatus according to claim 25 wherein said function is further adapted for  
2 substituting said at least one term in said set of terms for said at least one term in a response to  
3 be sent to said application.

1 27. An apparatus according to claim 20 wherein said first set of terms is representative of a  
2 set of responses expected by said application and said at least one term is associated with a  
3 function that is performed when said voice application platform recognizes said at least one  
4 term, whereby said function is adapted to include in a response to be sent to said application, a  
5 term selected from a memory as a function of said at least one term recognized by said voice  
6 application platform.

1 28. An apparatus according to claim 27 wherein said term selected from a memory is  
2 associated with a user of said voice application platform.

1 29. An apparatus according to claim 20, wherein said command processor is connected to  
2 said speech recognizer and further adapted for receiving user responses recognized by said  
3 speech recognizer and for modifying said user response if said response matches said at least  
4 one term included in said first set of terms.

1 30. An apparatus according to claim 18 wherein said first unit of input information includes  
2 a first type of input information associated with a first speech recognizer based upon a first  
3 speech recognition paradigm and said first unit of input information is replaced with a second  
4 unit of input information which includes a second type of input information associated with a  
5 second of speech recognizer based upon a second speech recognition paradigm.

1 31. An apparatus according to claim 30 wherein said second unit of input information is the  
2 speech equivalent to said first unit of input information with respect to the speech recognized.

1 32. An apparatus according to claim 30 wherein said first unit of input information  
2 represents a first set of terms and said second unit of input information represents a second set of  
3 terms and said first set of terms is a subset of said second set of terms.

1 33. An apparatus according to claim 18 further comprising a prompt synthesizer for  
2 receiving information representative of a prompt, and wherein said first unit of input  
3 information includes information representative of a first prompt and said command processor  
4 receives said information representative of said first prompt and said command processor  
5 modifies said first unit of input information as a function of said information representative of  
6 said first prompt.

1 34. An apparatus according to claim 18 further comprising a prompt synthesizer for receiving  
2 information representative of a prompt, and wherein said information representative of said first  
3 prompt is received from said application and said voice application platform is adapted for  
4 presenting said first prompt to a user and a second prompt to said user.





3 input information have a subset of responses in common with the responses represented by the  
4 first unit of information and the second information.

1 40. A method according to claim 35 wherein said first unit of input information is  
2 representative of responses expected by said application and said second unit of input  
3 information is representative of a second set of responses that includes at least one response that  
4 is a synonym of at least one response in said first set of responses.

1 41. A method according to claim 35 wherein said first unit of input information is  
2 representative of responses expected by said application and said second unit of input  
3 information is representative of a second set of responses that includes at least one response that  
4 is not included in said first set of responses.

1 42. A method according to claim 41 further comprising the steps of:  
2 receiving said at least one response not included in said first set of responses and  
3 executing a function associated with said at least one response not included in said first  
4 set of responses.



analyzing said information representative of a prompt to identify a characteristic of said  
information representative of a prompt and  
modifying said first unit of input information as a function of said characteristic of said  
information representative of a prompt to produce a second unit of input information  
representative of a second set of responses.

48. A method of providing a user interface comprising:  
receiving a first unit of input information from an application, said first unit of input  
information including information representative of a first set of responses expected to be  
received by said application;  
analyzing said first unit of input information to identify a characteristic of said first unit  
of input information;  
replacing said first unit of input information with a second unit of input information  
representative of a second set of responses selected as a function of said characteristic of first  
unit of information.

49. A method according to claim 48 wherein said first set of input information is a first  
grammar.

50. A method according to claim 48 wherein said first set of responses represented by said  
first unit of input information is a subset of the second set of responses represented by said  
second unit of input information.

1 51. A method according to claim 48 wherein said second set of responses represented by  
2 said second unit of input information includes at least one response that is not included in said  
3 first set of responses represented by said first set of input information.

1 52. A method according to claim 48 wherein said first set of responses represented by said  
2 first unit of input information and said second set of responses represented by said second unit  
3 of input information have a subset of responses in common with the responses represented by  
4 the first unit of information and the second information.

1 53. A method according to claim 48 wherein said first unit of input information is  
2 representative of responses expected by said application and said second unit of input  
3 information is representative of a second set of responses that includes at least one response that  
4 is a synonym of at least one response in said first set of responses.

1 54. A method according to claim 48 wherein said first unit of input information is  
2 representative of responses expected by said application and said second unit of input  
3 information is representative of a second set of responses that includes at least one response that  
4 is not included in said first set of responses.

1 55. A method according to claim 54 further comprising the steps of:  
2 receiving said at least one response not included in said first set of responses and  
3 executing a function associated with said at least one response not included in said first  
4 set of responses.



replacing said first unit of input information with a second unit of input information  
representative of a second set of responses as a function of said characteristic of said information  
representative of a prompt to produce.

61. An apparatus comprising:

a general purpose computer including associated memory storage;  
a voice application platform adapted for receiving a unit of input information from and  
sending a response to an application, said voice application platform including a speech  
recognizer for recognizing speech as a function of said unit of input information; and  
a command processor adapted for analyzing a first unit of input information and  
identifying a characteristic of a first unit of input information input into said voice application  
platform and for selecting a response to be sent to said application as a function of said  
characteristic.

62. An apparatus according to claim 61 wherein said first unit of input information includes  
a grammar.

63. An apparatus according to claim 61 wherein said characteristic is indicative that said first  
unit of input information includes a set of terms.

64. An apparatus according to claim 63 wherein said set of terms is representative of a  
numeric value.

65. An apparatus according to claim 63 wherein said set of terms is selected from the group  
including days of the week, months of the year and years.

66. An apparatus according to claim 61 wherein said input processor is adapted for sending said response to said application without said speech recognizer recognizing speech.

67. An apparatus according to claim 61 further including a prompt generator adapted for generating a prompt, and said input processor is adapted for sending said response to said application without generating a prompt.

68. An apparatus according to claim 61 further including a prompt generator adapted for generating a prompt, wherein said unit of input information includes information representative of a first prompt and said input processor is adapted for sending said response to said application without generating said first prompt.

69. An apparatus according to claim 61 further including a prompt generator adapted for generating a prompt, wherein said unit of input information includes information representative of a first prompt and said input processor is adapted for modifying said first prompt to create a second prompt including said first prompt and an additional prompt, and for sending said response to said application as a function of said characteristic of said first unit of input information and if said speech recognizer recognizes a user response corresponding to a response to said additional prompt.

70. An apparatus according to claim 69 wherein said first unit of input information includes information representative of an account number, said response to be sent to said application is



3 an account number and said additional prompt represents a query asking for authorization to  
4 include said account number in said response.

1 71. An apparatus according to claim 61 wherein said response is a predefined response,  
2 stored in memory accessible by said voice application platform.

1 72. An apparatus according to claim 61 wherein said predefined response is associated with  
2 a user of said voice application platform.

1 73. An apparatus according to claim 61 wherein said voice application platform is further  
2 adapted for receiving a second unit of input information and for selecting a second response to  
3 send to said application as a function of said characteristic of said first unit of information.

1 74. An apparatus according to claim 73 wherein said voice application platform is further for  
2 identifying a characteristic of said second unit of input information and for selecting a second  
3 response to send to said application as a function of said characteristic of said second unit of  
4 information.

1 75. A method of providing a user interface comprising:  
2 receiving a first unit of input information from an application, said first unit of input  
3 information including information representative of a first set of responses expected to be  
4 received by the application;  
5 analyzing said first unit of input information to identify a characteristic of said first unit  
6 of input information;

7 selecting a response to be sent to said application as a function of said characteristic of  
8 first unit of input information.

1 76. A method according to claim 75 wherein said first set of input information includes a  
2 grammar.

1 77. A method according to claim 75 wherein said characteristic is indicative that said first  
2 unit of input information includes a set of terms.

1 78. A method according to claim 77 wherein said set of terms is representative of a numeric  
2 value.

1 79. A method according to claim 77 wherein said set of terms is selected from the group  
2 including days of the week, months of the year and years.

1 80. A method according to claim 75 further comprising the step of sending said selected  
2 response to said application.

1 81. A method according to claim 80 wherein said selected response is sent to said  
2 application without receiving input from a user.

1 82. A method according to claim 75 wherein said first unit of input information includes  
2 information representative of a prompt and said selected response is sent to said application  
3 without presenting a prompt to a user.

1 83. A method according to claim 75 wherein said first unit of input information includes  
 2 information representative of a prompt and said selected response is sent to said application  
 3 without presenting said prompt to a user.

1 84. A method according to claim 75 wherein said first unit of input information includes  
 2 information representative of a first prompt and said method further comprises the steps of  
 3 selecting a presenting a second prompt as a function said characteristic of said first unit of input  
 4 information and presenting said second prompt to a user.

1 85. A method according to claim 84 further comprising the step of presenting said first  
 2 prompt to said user.

1 86. A method according to claim 85 wherein said first unit of input information includes  
 2 information representative of an account number, said response is a user account number, and  
 3 said second prompt is a query asking said user for authorization to include said user account  
 4 number in said response.

87. A method according to claim 75 wherein said step of selecting a response to be sent to  
 said application as a function of said characteristic of first unit of input information, includes  
 selecting a predefined response stored in a memory storage device.

1 88. A method according to claim 75 wherein said selected response is associated with a user  
 2 of said user interface.



1 92. An apparatus according to claim 91 wherein said first unit of input information includes  
2 a grammar.

1 93. An apparatus according to claim 91 wherein said characteristic is indicative that said first  
2 unit of input information is representative of a first set of terms and said first unit of input  
3 information is modified to represent at least one additional term not included in said first set of  
4 terms.

1 94. An apparatus according to claim 93 wherein said at least one additional term is a  
2 synonym of at least one term in said first set of terms.

1 95. An apparatus according to claim 93 wherein said at least one additional term can be part  
2 of a phrase within which at least one term in said first set of terms can be used.

1 96. An apparatus according to claim 93 wherein said at least one additional term is  
2 associated with a first function that can be performed when said speech recognition means  
3 recognizes said at least one addition term.

1 97. An apparatus according to claim 93 wherein said first set of terms is representative of a  
2 set of responses expected to be received by said application and said at least one additional term  
3 is a synonym of at least one term in said set of terms.

1 98. An apparatus according to claim 93 wherein said first set of terms is representative of a  
2 set of responses expected to be received by said application and said at least one additional term

is associated with a first function that can be performed when said voice application platform recognizes said at least one addition term, whereby said function is adapted to include in a response to be sent to said application, at least one term in said first set of terms.

99. An apparatus according to claim 98 wherein said function is further adapted for substituting said at least one term in said first set of terms for said at least one additional term in a response to be sent to said application.

100. An apparatus according to claim 93 wherein said first set of terms is representative of a set of responses expected to be received by said application and said at least one additional term is associated with a first function that can be performed when said speech recognition means recognizes said at least one addition term, whereby said function is adapted to include in a response to be sent to said application, a term selected from a memory as a function of said at least one additional term recognized by said speech recognition means.

101. An apparatus according to claim 100 wherein said term selected from a memory is associated with a user of said voice application platform means.

102. An apparatus according to claim 93, wherein said command processing means is connected to said speech recognition means and includes means for receiving user responses recognized by said speech recognition means and means for modifying said user response if said response matches one of said additional terms of the modified first unit of input information.

103. An apparatus according to claim 91 wherein said first unit of input information includes a first type of input information associated with a first speech recognition means based upon a first speech recognition paradigm and said first unit of input information is modified to produce a second unit of input information which includes a second type of input information associated with a second speech recognition means based upon a second speech recognition paradigm which is different from said first speech recognition paradigm.

104. An apparatus according to claim 103 wherein said second unit of input information includes input information that is the speech equivalent to the input information in said first unit of input information with respect to the speech recognized.

105. An apparatus according to claim 103 wherein said first unit of input information represents a first set of terms and said second unit of input information represents a second set of terms and said first set of terms is a subset of said second set of terms.

106. An apparatus according to claim 91 further comprising prompt synthesizer mean for receiving information representative of a prompt and for presenting a prompt to a user, and wherein said first unit of input information includes information representative of a prompt and

4 said command processor receives said information representative of a prompt and said command  
5 processing means modifies said first unit of input information as a function of said information  
6 representative of a prompt.

1 107. An apparatus according to claim 91 further comprising a prompt synthesizer means for  
2 receiving information representative of a prompt and for presenting a prompt to a user, and  
3 wherein said information representative of said first prompt is received from said application  
4 and said voice application platform means is adapted for presenting said first prompt to a user  
5 and a second prompt to said user.



1 108. An apparatus comprising:

2 general purpose computing means for processing data, including associated memory  
3 means for storing data;

4 voice application platform means for receiving a unit of input information from an  
5 application, said voice application platform including a speech recognition means for  
6 recognizing speech as a function of said unit of input information; and

7 command processing means for analyzing a first unit of input information and  
8 identifying a characteristic of said first unit of information received by said voice application  
9 platform and for replacing said first unit of information with a second unit of input information  
10 selected as a function of said characteristic.

1 109. An apparatus according to claim 108 wherein said first unit of input information includes  
2 a grammar and said second unit of input information includes a grammar.

1 110. An apparatus according to claim 108 wherein said characteristic is indicative that said  
2 first unit of input information is representative of a first set of terms and said second unit of  
3 input information is representative of a second set of terms that includes at least one additional  
4 term not included in said first set of terms of.

1 111. An apparatus according to claim 110 wherein said at least one additional term is a  
2 synonym of at least one term in said first set of terms.

1 112. An apparatus according to claim 110 wherein said at least one additional term can be part  
2 of a phrase within which at least one term in said first set of terms can be used.

1 113. An apparatus according to claim 110 wherein said at least one additional term is  
2 associated with a function that is performed by said voice application platform means.

1 114. An apparatus according to claim 110 wherein said set of first terms is representative of a  
2 set of responses expected by said application and said at least one additional term is a synonym  
3 of at least one term in said first set of terms.

1 115. An apparatus according to claim 110 wherein said first set of terms is representative of a  
2 set of responses expected by said application and said at least one additional term is associated  
3 with a function that is performed when said speech recognition means recognizes said at least  
4 one additional term, whereby said function said function is adapted to include in a response to be  
5 sent to said application, whereby said function said function is adapted to include in a response  
6 to be sent to said application, at least one term in said set of terms.

1 116. An apparatus according to claim 115 wherein said function is further adapted for  
2 substituting said at least one term in said set of terms for said at least one additional term in a  
3 response to be sent to said application.

1 117. An apparatus according to claim 110 wherein said first set of terms is representative of a  
2 set of responses expected by said application and said at least one additional term is associated  
3 with a function that is performed when said speech recognition means recognizes said at least

one additional term, whereby said function said function is adapted to include in a response to be sent to said application, a term selected from a memory as a function of said at least one additional term recognized by said voice application platform.

118. An apparatus according to claim 117 wherein said term selected from a memory is associated with a user of said voice application platform means.

119. An apparatus according to claim 110, wherein said command processing means is connected to said speech recognition means, said command processing means further including means for receiving a user response recognized by said speech recognition means and for modifying said user response if said response matches one of said additional terms of the second unit of input information.

120. An apparatus according to claim 108 wherein said first unit of input information includes a first type of input information associated with a first speech recognition means based upon a first speech recognition paradigm and said first unit of input information is replaced with a second unit of input information which includes a second type of input information associated with a second of speech recognition means based upon a second speech recognition paradigm.

121. An apparatus according to claim 120 wherein said second unit of input information is the speech equivalent to said first unit of input information with respect to the speech recognized.

1 122. An apparatus according to claim 120 wherein said first unit of input information  
2 represents a first set of terms and said second unit of input information represents a second set of  
3 terms and said first set of terms is a subset of said second set of terms.

1 123. An apparatus according to claim 108 further comprising prompt synthesizer means for  
2 receiving information representative of a prompt and for presenting a prompt to a user, and  
3 wherein said first unit of input information includes information representative of a prompt and  
4 said command processing means includes means for receiving said information representative of  
5 a prompt and said command processing means includes means for modifying said first unit of  
6 input information as a function of said information representative of a prompt.

1 124. An apparatus according to claim 108 further comprising a prompt synthesizer means for  
2 receiving information representative of a first prompt and for presenting a prompt to a user, and  
3 wherein said information representative of said first prompt is received from said application  
4 and said voice application platform means includes means for presenting said first prompt to a  
5 user and second prompt to said user.

1 125. An apparatus comprising  
2 a general purpose computer including associated memory storage;  
3 a voice application platform adapted for receiving a unit of input information from and  
4 sending a response to an application, said voice application platform including a speech  
5 recognizer for recognizing speech as a function of said unit of input information and a prompt  
6 generator adapted for producing a prompt as function of said unit of input information;  
7 a first processor adapted for analyzing a first unit of input information and identifying a  
8 characteristic of a first unit of input information received from said voice application platform  
9 and for producing a second unit of input information as a function of said characteristic  
10 a second processor adapted for selecting a response to be sent to said application as a  
11 function of said characteristic.

1 126. An apparatus according to claim 125 wherein said response to be sent to said application  
2 is selected from memory.

1 127. An apparatus according to claim 125 wherein said response to be sent to said application  
2 is selected from memory and said response is associated with a user of said voice application  
3 platform.

1 128. An apparatus according to claim 125 wherein said response to be sent to said application  
2 is selected from memory and said response includes personal information associated with a user  
3 of said voice application platform.

1 129. An apparatus according to claim 125 wherein said response to be sent to said application  
2 is selected from memory and said response includes an account number associated with a user of  
3 said voice application platform.

1 130. An apparatus comprising  
2 a general purpose computer including associated memory storage;  
3 a voice application platform adapted for receiving a unit of input information from and  
4 sending a response to an application, said voice application platform including a speech  
5 recognizer for recognizing speech as a function of said unit of input information and a prompt  
6 generator adapted for producing a prompt as function of said unit of input information;  
7 a first processor adapted for analyzing a first unit of input information and identifying a  
8 characteristic of a first unit of input information received from said voice application platform  
9 and for producing a second unit of input information as a function of said characteristic  
10 a second processor adapted for analyzing a received response recognized by said speech  
11 recognizer and for selecting a response to be sent to said application as a function of said  
12 received response.

1 131. An apparatus according to claim 130 wherein said response to be sent to said application  
2 is selected from memory.

1 132. An apparatus according to claim 130 wherein said response to be sent to said application  
2 is selected from the group including the received response and responses stored in memory.

- 1 133. An apparatus according to claim 130 wherein said response to be sent to said application
- 2 is a synonym of said received response.

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